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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,290	06/14/2005	Thomas L. Haschen	4845-0101PUS2	3643
2292 7590 04/05/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MAHAFKEY, KELLY J	
			ART UNIT	PAPER NUMBER
			1761	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/05/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/530,290	HASCHEN ET AL.	
	Examiner	Art Unit	
	Kelly Mahafkey	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 84-122 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 84-122 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 84-122 are pending.

Amendments made 3/14/07 have been entered.

Claim Rejections - 35 USC § 112 1st Paragraph

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Withdrawn 112 1st Paragraph Rejections:

The 112 1st paragraph rejection of claims 84, 103, 105, 109, 112, 114, 115, 119-121 for reciting "over" and "greater than" certain percentages, has been withdrawn in light of applicant's amendments filed 3/14/07.

The 112 1st paragraph rejection of claim 98 for reciting "350F-500F", has been withdrawn in light of applicant's amendments filed 3/14/07.

Maintained 112 1st Paragraph Rejections:

Claims 96, 106, 110, 116, and 122 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 96, 106, 110, 116, and 122 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims recite, "the bypass protein level *of the end product* that is over 50% and up to about 83% of the crude protein *is increased*", however, there is no support in the specification, as originally filed, for the increase of the nutritional components of the end product, as recited in claims.

Claim Rejections - 35 USC § 112 2nd Paragraph

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Withdrawn 112 2nd Paragraph Rejections:

The 112 2nd paragraph rejection of claim 86 for reciting "temperature" has been withdrawn in light of applicant's amendments filed 3/14/07.

The 112 2nd paragraph rejection of claims 87, 89, and 90 for reciting "RUP is increased in a range from about 27% to about 83%" has been withdrawn in light of applicant's amendments filed 3/14/07.

Maintained/New 112 2nd Paragraph Rejections:

Claims 84-122 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 84-122 are rejected for reciting a relative term. The term "an empirical relationship" in claims 84, 86, 103, 105, 109, 112, 114, 115, and 119-121 is a relative term that renders the claims indefinite. The term "an empirical relationship" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is noted that the claims provide a formula for use as the empirical formula, however, the given formula is never referred to in a manner such that it is clear it is the "said empirical relationship" stated in the claim.

Claim 98 recites the limitation "air temperature of the dryer" in claim 84. There is insufficient antecedent basis for this limitation in the claim. Claim 84 does not recite the term "air temperature of a dryer" or even the term "dryer", as such there is insufficient antecedent basis for this limitation.

Claims 87, 89, 90 96, 106, 110, 116, and 122 recites the limitation "wet by products soluble nutrient source mixture" and "wet soluble nutrient source mixture". There is insufficient antecedent basis for this limitation in the claim. The independent claims from which these claims depend on do not recite the specific mixtures as claimed.

Claims 87, 89, 90 96, 106, 110, 116, and 122 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps. The claims refer to

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increasing the nutrient values of a source mixture, however, they do not refer to the method by which this is done. Thus, it is unclear in these method claims in which step of the independent claim an increased nutrient value is achieved. For example, it is unclear in claim 87 if the nutrient increase is achieved in step a of claim 84, step b of claim 84, or in some other undisclosed step.

Claims 109-111 and 119-122 are indefinite. The claims recite a system for predictably enhancing nutrient value, a system for determining means, a system for mixing, and a system adjusting means. It is unclear as to what apparatus are associated with the "systems". For example, it is unclear as to what kind of apparatus is necessary for "a system for determining means for determining the desirable levels of crude protein [in the feed composition]...". It is unclear if the system is based on personal observation of the animal for which the feed is to be fed; it is unclear if the system is based on chemical observation of the animal to which the feed is to be ^{fed}~~feed~~, ect.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 84-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitritter et al. (US 5824355) in view of Schingoethe (Feed Wet Distillers Grains to Dairy Cattle, May 2001). The references and rejection are incorporated herein and as cited in the office action mailed November 14, 2006.

Regarding newly added amendments, Heitritter et al. (Heitritter) teach a method of enhancing the nutrient value of feed or feed supplement for lactating ruminant animals, as discussed in the previous office action. Heitritter teaches of creating a product base composed of an enhanced nutrient source, including corn and/or soybean meal, and adjusting the temperature and/or the moisture content of the base composition to a temperature between 150-220F. Heitritter teaches that the final product has the following characteristics crude protein content of 47.2%, UIP/RUP

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content of 69.9% of the crude protein, about 8% lysine, about 2% methionine, a post ruminal digestibility of the UIP/RUP of 60.7%, and 12-16% moisture. Refer specifically to Abstract, Column 1 lines 5-23, Column 2 lines 50-67, Column 3 lines 34 and 45-52, Column 4 lines 37-45 and 52-56, Column 5 lines 5-10, and Examples 1-5.

Heitritter, however, is silent to the increased percentage of nutrient values in the wet by product nutrient source mixture as recited in claims 87, 89, and 90, to the additional enhancement of the final feed composition as recited in claims 96, 106, 110, 116, and 122, to the drier temperature as 350-500F as recited in claim 98, and to an empirical formula relating UIP to end product temperature as describing the method of enhancing the feed composition.

Regarding the increased percentage of nutrient values in the wet by product nutrient source mixture as recited in claims 87, 89, and 90, Heitritter in view of Schingoethe teach of a similar base nutrient composition and an end product with the same nutrient values as applicant. Heitritter also teaches of the same method (i.e. heating) of increasing the nutrient value in the base composition. Thus, as the references teach of a similar start composition, the same method of treatment to the start composition, and a final product with similar nutrient values, one of ordinary skill in the art at the time the invention was made would expect the same percentage increase in the nutrient values of the start composition to the final composition, as instantly claimed.

Regarding the additional enhancement of the final feed composition as recited in claims 96, 106, 110, 116, and 122, Heitritter teaches of a method for increasing the nutrient values in feed, and the product produced by the said method, as instantly claimed. Heitritter, however, does not disclose of retreating the final feed product to further raise the nutrient values of the final product. It would have been obvious to one of ordinary skill in the art at the time the invention was made to retreat the product by the method as taught by Heitritter to produce a feed with an increased nutrient value if it was desired to feed the animal a smaller amount of feed and obtain the same positive results from the feed (i.e. the concentration of nutrients within the feed would need to be

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greater if a smaller amount of feed was to be feed to the animal and yield the same positive results).

Regarding the drier temperature as 350-500F as recited in claim 98, Heitritter teaches that the feed product can be formed by heating from 150-220F or at those temperature ranges designed to prevent overcooking and/or burning of the moist meal feed (Column 4 lines 36-45). Time and temperature are known to have an inverse relationship for the purposes of heating, i.e. the higher the temperature the less heating time required to achieve the desired final product as long as the temperature does not reach or exceed the burning or destroying point of the product being produced and visa versa. To modify the time and temperature of a treatment is to optimize the making of the product based on the time and the equipment available at the time of production. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the cooking temperature of the equipment as taught by Heitritter, in order to achieve a decreased cooking time and efficiently utilize the available heating equipment.

Regarding an empirical formula relating UIP to end product temperature as describing the method of enhancing the feed composition, Hietritter teaches of a feed with a specific RUP/IUP level of 69.9% and coordinating end product temperatures of at least 200F, to alternatively explain the method of increasing the nutrient value of a feed as taught by applicant. It is noted that different process ~~which~~ which are the same can be explained through different means, i.e. gravity can be explained through the process of a pencil dropping or through a mathematical equation. Although, different words and images are utilized to describe the processes, the processes themselves are not different, but the same. Since the applicant and the reference both teach of the same process, i.e. heating a feed composition to a temperature of at least 200F, and the same product produced, i.e. a feed composition with an RUP level of 69.9%, one of ordinary skill in the art would expect the reference and the claimed invention to produce the same product through the same method, absent any clear and convincing arguments to the contrary.

Response to Arguments

Applicant's arguments, filed March 14, 2007 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Hietritter does not teach of a method of predictably enhancing feed products. It is noted that "predictably" is defined as "to know in advance". Hietritter teaches of a method to enhance the nutrient value of feed; the method as taught by Hietritter is a method, which is known in advance, to enhance the nutrient value of feed, thus Hietritter teaches of a method to predictably enhance the nutrient value of feed products (Hietritter Column 2 lines 50-60 and Column 9 lines 15-53).

Applicant argues, page 34 of the response, that the reference teaches of step (2), but does not teach of steps (1) and (3), however applicant does not identify a step (3) to which they are referring. Regarding step (1), or the determination of specific desirable nutrient values of an end product, Hietritter teaches of increasing the milk production in cattle, as a direct result of feeding the cattle with nutrient enhanced feed. The increased milk production is a result of the disclosed method of enhancing the nutrient value of feed to specific values which provide for the increased milk production in the cattle. Refer specifically to Hietritter Column 2 lines 50-60 and Column 9 lines 15-53.

Applicant argues that the Hietritter does not teach of a formula, specifically an empirical formula, Applicant is referred to the rejection above, which address this limitation.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

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where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, applicant argues that there is no motivation to alter the start feed composition as taught by Heitritter. Regarding the feed composition composed of a base that includes wet end fermenters grain byproducts Heitritter teaches of a protein enhanced ruminant feed for lactating animals, which includes soybean and/or corn meal (Column 8 lines 48-55). Schingoethe teaches that the inclusion of wet end fermenter's grain, in feed for lactating cattle, has been known for several years. Schingoethe teaches that corn distiller's grain is a good quality protein source. Schingoethe teaches animal performance is better when cattle are feed wet corn distiller's grain as opposed to dry corn distiller's grain. Schingoethe teaches that corn gluten meal (a form of corn meal) is a very good protein supplement, but is best when fed in combination with other protein supplements. Refer specifically to Page 1 paragraph 1, page 3 paragraph 3, page 4 paragraph 1, and Page 5 paragraph 3. Thus, one would have been motivated to include wet end fermenter's grain in the corn and/or soybean meal as taught in the composition of Heitritter because of the benefits as taught by Schingoethe. Furthermore, it is noted that Heitritter teaches of a base composition with soybean and/or corn meal. The fact that Heitritter teaches of a preferred start material that is not soybean and/or cornmeal is not a teaching away from the use soybean and/or corn meal as a base composition.

Applicant argues that Heitritter does not teach of UIP as a percentage of crude protein. Applicant is referred to the rejection above, which addresses this argument.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly Mahafkey whose telephone number is (571) 272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kelly Mahafkey
Examiner
Art Unit 1761



KEITH HENDRICKS
PRIMARY EXAMINER